INTRODUCTION

TO THE READER

- This manual is written for an experienced technician to provide technical information needed to maintain and repair this machine.
  - Be sure to thoroughly read this manual for correct product information and service procedures.
  - If you have any questions or comments, at if you found any errors regarding the contents of this manual, please contact using "Service Manual Revision Request Form" at the end of this manual.
    (Note: Do not tear off the form. Copy it for usage.):

    Publications Marketing & Product Support
    Hitachi Construction Machinery Co. Ltd.
    TEL: 81-298-32-7173
    FAX: 81-298-31-1162

ADDITIONAL REFERENCES

- Please refer to the materials listed below in addition to this manual.
  - The Operator's Manual
  - The Parts Catalog
  - Operation Manual of the Engine
  - Parts Catalog of the Engine
  - Hitachi Training Material

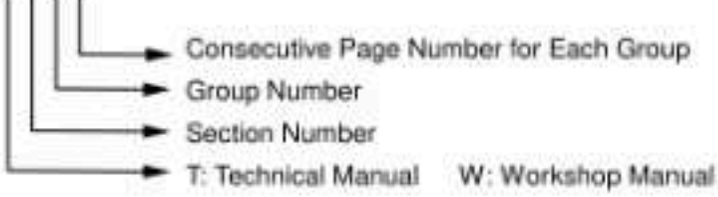
MANUAL COMPOSITION

- This manual consists of two portions:
  the Technical Manual and the Workshop Manual.
  Use the manuals according to purpose.
  - Information included in the Technical Manual:
    technical information needed for redelivery and delivery, operation and activation of all devices and systems, operational performance tests, and troubleshooting procedures.
  - Information included in the Workshop Manual:
    technical information needed for maintenance and repair of the machine, tools and devices needed for maintenance and repair, maintenance standards, and removal/installation and assemble/disassemble procedures.

PAGE NUMBER

- Each page has a number, located on the center lower part of the page, and each number contains the following information:

Example : T 1-3-5



MidWestTech | Hitachi ZX27U, ZX30U, ZX35U Excavator Workshop Service Manual |... Order the manual at mid-west-tech.com >

SECTION 1
GENERAL INFORMATION

CONTENTS

Group 1 Precautions for Disassembling and Assembling

Precautions for Disassembling and Assembling W1-1-1

Group 2 Tightening

Tightening Torque Specification W1-2-1
Torque Chart W1-2-2
Piping Joint W1-2-5

Group 3 Painting

Painting W1-3-1

Group 4 Bleeding Air

Bleed Air from Hydraulic Oil Tank W1-4-1

MidWestTech | Hitachi ZX27U, ZX30U, ZX35U Excavator Workshop Service Manual |... Order the manual at mid-west-tech.com >

SECTION 2
UPPERSTRUCTURE



CONTENTS

Group 1 Canopy
Remove and Install Canopy W2-1-1

Group 2 Counterweight
Remove and Install Counterweight W2-2-1

Group 3 Pump Device
Remove and Install Pump Device W2-3-1
Disassemble Pump Device (27u) W2-3-5
Assemble Pump Device (27u) W2-3-9
Disassemble Pump Device (30u, 35u) W2-3-13
Assemble Pump Device (30u, 35u) W2-3-15
Maintenance Standard W2-3-19

Group 4 Control Valve
Remove and Install Control Valve W2-4-1
Disassemble And Assemble Control Valve W2-4-6

Group 5 Swing Device
Remove and Install Swing Device W2-5-1
Disassemble Swing Reduction Gear W2-5-6
Assemble Swing Reduction Gear W2-5-10
Disassemble Swing Motor W2-5-14
Assemble Swing Motor W2-5-16
Maintenance Standards W2-5-20

Group 6 Pilot Valve
Remove and Install Pilot Valve W2-6-1
Disassemble Travel Pilot Valve W2-6-10
Assemble Travel Pilot Valve W2-6-14
Disassemble Front Pilot Valve W2-6-18
Assemble Front Pilot Valve W2-6-22
Disassemble Blade and Boom Swing Pilot Valve W2-6-26
Assemble Blade and Boom Swing Pilot Valve W2-6-28

Group 7 Solenoid Valve
Remove and Install Solenoid Valve W2-7-1
Disassemble and Assemble Solenoid Valve W2-7-3

MidWestTech | Hitachi ZX27U, ZX30U, ZX35U Excavator Workshop Service Manual |... Order the manual at mid-west-tech.com >

SECTION 3
UNDERCARRIAGE



CONTENTS

Group 1 Swing Bearing
Remove and Install Swing Bearing W3-1-1

Group 2 Travel Device
Remove and Install Travel Device W3-2-1
Disassemble Travel Device (27u) W3-2-6
Assemble Travel Device (27u)..... W3-2-8
Disassemble Travel Motor (27u)..... W3-2-12
Assemble Travel Motor (27u).....3-2-14
Disassemble Brake Valve (27u)..... W3-2-18
Assemble Brake Valve (27u) W3-2-20
Disassemble Travel Device (30u, 35u) W3-2-22
Assemble Travel Device (30u, 35u)..... W3-2-26
Disassemble and Assemble Brake Valve (30u, 35u) W3-2-32
Maintenance Standards..... W3-2-34

Group 3 Center Joint
Remove and Install Center Joint..... W3-3-1
Disassemble Center Joint..... W3-3-8
Assemble Center Joint W3-3-10

Group 4 Track Adjuster
Remove and Install Track Adjuster W3-4-1
Disassemble Track Adjuster W3-4-2
Assemble Track Adjuster..... W3-4-8

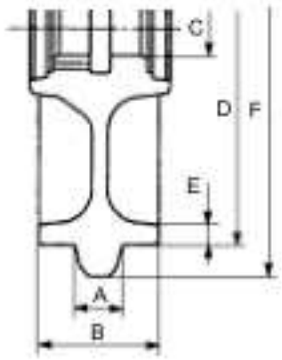
Group 5 Front Idler
Remove and Install Front Idler..... W3-5-1
Disassemble and Assemble Front Idler ... W3-5-2
Maintenance Standards..... W3-5-4

Group 6 Upper and Lower Roller
Remove and Install Lower Roller W3-6-1
Disassemble and Assemble Lower Roller.....W3-6-4
Maintenance Standards W3-6-6

Group 7 Track
Remove and Install Rubber Crawler W3-7-1
Maintenance Standards W3-7-3

MidWestTech | Hitachi ZX27U, ZX30U, ZX35U Excavator Workshop Service Manual |... Order the manual at mid-west-tech.com >

MAINTENANCE STANDARD



W903-03-03-001

Unit: mm (in)

	Standard	Allowable Limit	Remedy
A	31	(25)	Cladding by welding and hand finishing, or replace
B	80	-	
C	34 / 39	-	
D	269	272	
E	10	-	
F	307	-	

NOTE: ZAXIS27u / 30u, 35u

Axle and Bushing

Unit: mm (in)

		Standard	Allowable Limit	Remedy
Axle	Outer Dia.	30 / 35	(29.2) / (34.2)	Replace
Bushing	Inner Dia.	30 / 35	(30.5) / (35.5)	
	Flange Thickness	2.0	(1.5)	

NOTE: ZAXIS27u / 30u, 35u

NOTE: Dimensions in parentheses [ ] show the reference values.

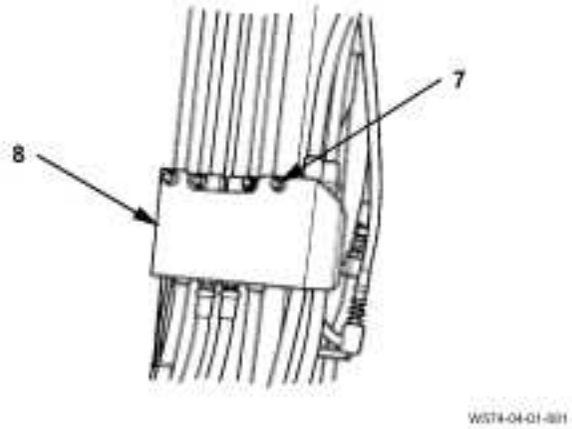
Lubricant Oil: Engine oil SAE30 CD class.
Quantity Oil: 30 mL (30 cm^3)

MidWestTech | Hitachi ZX27U, ZX30U, ZX35U Excavator Workshop Service Manual |... Order the manual at mid-west-tech.com >

CAUTION: Front attachment weight:
279 kg (615 lb) (ZAXIS 27u)
311 kg (686 lb) (ZAXIS 30u)
354 kg (780 lb) (ZAXIS 35u)

5. Attach a nylon sling onto boom cylinder (3) to hoist boom cylinder (3) by crane and connect hoses (6) (2 used) to the boom cylinder.
   : 22 mm
   : 39 N·m (4 kgf·m, 29 lbf·ft)

6. Install cover (8) with bolts (7) (2 used).
   : 13 mm
   : 20 N·m (2 kgf·m, 15 lbf·ft)

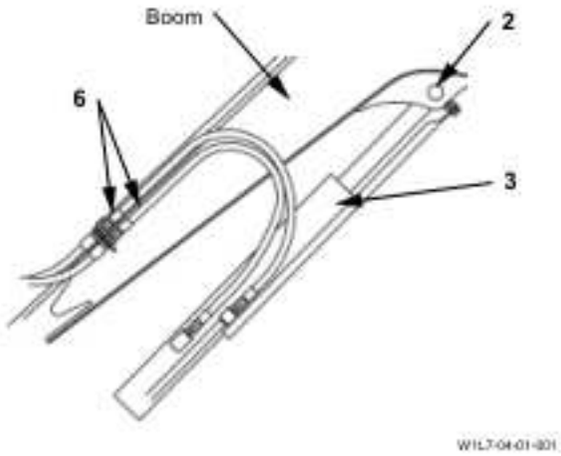


W5T4-04-01-801

CAUTION: If the air trapped in a cylinder is suddenly compressed, the temperature inside will rise as the temperature of the hydraulic oil will do. This may cause damage to the seals and rings.

7. Start the engine. Operate the cylinder rod to retract fully to the stroke end. Extend the cylinder rod slowly to align the boom cylinder rod with the pin (2) hole .

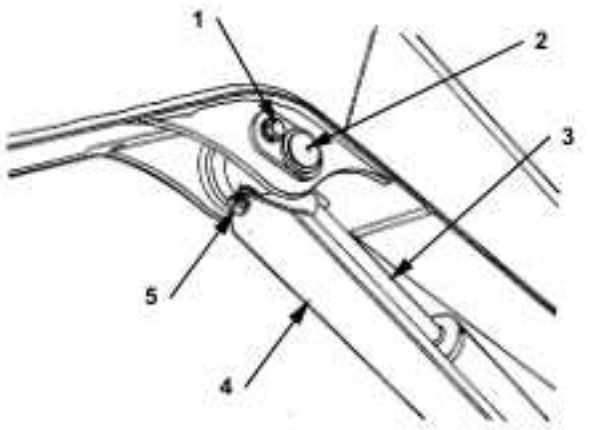
NOTE: When finishing the work in step 7, release all air from the cylinder to prevent damaging the components.



W1L7-04-01-801

8. Drive pin (2) in with a hammer. Install bolt (1) to secure the pin.
   : 19 mm
   : 88 N·m (9 kgf·m, 65 lbf·ft)

9. Install cover (4) with bolt (5).
   : 17 mm
   : 50 N·m (5.1 kgf·m, 37 lbf·ft)



W527-04-01-801

IMPORTANT: Fill the hydraulic oil to the specified level after installation. Operate every cylinder fully to the stroke end several times to release the air from the circuit and check each connection of hoses for any oil leakage.

MidWestTech | Hitachi ZX27U, ZX30U, ZX35U Excavator Workshop Service Manual |... Order the manual at mid-west-tech.com >